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Evaluation of an Immunocapture-Agglutination Test (Brucellacapt) for diagnosis of Human Brucellosis

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Introduction & Objectives: Brucellosis is one of the most common zoonotic diseases in Iran and human brucellosis is endemic in all parts of the country. Diagnosis of brucellosis is frequently difficult to establish. This is not only because the disease clinically mimics any infectious and non-infectious diseases, but also because the established diagnostic methods are not always successful in isolating the organisms. The aim of this study was to evaluate the efficacy of Brucellacapt test as a diagnostic tool for diagnosis of human brucellosis.

Patients & Methods: Eleven sera from patients with a diagnosis of brucellosis who had positive blood culture for *Brucella melitensis*, 54 sera from patients in whom brucellosis was suspected but not confirmed, and 32 sera from healthy individuals as control were included in the study. The seroagglutination test (SAT), and Brucellacapt test were evaluated.

Results: All of 11 (100%) sera samples from confirmed cases were found positive by both SAT and Brucellacapt test. Out of 64 sera from suspected cases, 53 (81.5%) sample were found positive by Brucellacapt and all (100%) samples were positive by SAT test. Of the 32 control sera, all were negative in SAT test, but only one sample was positive in Brucellacapt test.

Conclusion: In confirmed patients, Brucellacapt and SAT tests showed a similar sensitivity in diagnosis of human brucellosis. Also the specificity of the both tests almost is the same. Since the Brucellacapt test had a high sensitivity and specificity, as the SAT test, Brucellacapt could help the diagnosis of human brucellosis. In addition, the detection of specific immunoglobulins by a single, simple and rapid test is a major advantage of Brucellacapt test.